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Patent Attorney Docket No. 033622-008

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Jun-ichi ISHIKAWA et al.

Group Art Unit: 1746

Application No.: 10/820,842

Examiner:

Filing Date: April 9, 2004

Confirmation No.: 8474

Title: **CROSSLINKABLE AROMATIC RESIN HAVING PROTONIC ACID GROUP, AND ION CONDUCTIVE POLYMER MEMBRANE, BINDER AND FUEL CELL USING THE RESIN**

**SECOND
INFORMATION DISCLOSURE STATEMENT
TRANSMITTAL LETTER**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is a SECOND Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge _____ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of _____ is enclosed for the fee due.
- ☐ Charge _____ to credit card. Form PTO-2038 is attached.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

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Date: August 9, 2004

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INTELLECTUAL PROPERTY LAW

**SECOND
INFORMATION DISCLOSURE STATEMENT
TRANSMITTAL LETTER**

(4/04)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)	
Jun-ichi ISHIKAWA et al.)	Group Art Unit: 1746
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Filed: April 9, 2004)	Confirmation No.: 8474
For: CROSSLINKABLE AROMATIC RESIN)	
HAVING PROTONIC ACID GROUP,)	
AND ION CONDUCTIVE POLYMER)	
MEMBRANE, BINDER AND FUEL)	
CELL USING THE RESIN)	

SECOND INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, the accompanying information is being submitted in accordance with 37 C.F.R. §§ 1.97 and 1.98. The information includes documents identified in the specification, translated claims from Japanese patent documents identified in the Search Report from the corresponding European application (which were previously identified in the Information Disclosure Statement filed on April 9, 2004) and documents which have been found after the international filing date. For the Examiner's convenience, corresponding English language documents have been identified with respect to certain of the non-English language documents.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,
BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date August 9, 2004

By: Robert G. Mukai
Robert G. Mukai
Registration No. 28,531

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**SECOND
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet	1	of	2	Application Number	10/820,842
				Filing Date	April 9, 2004
				First Named Inventor	Jun-ichi ISHIKAWA et al.
				Examiner Name	
				Attorney Docket Number	033622-008

U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	6,221,923		Schnurnberger et al.	04-24-2001
	6,090,895		Mao et al.	07-18-2000
	6,180,559		Roberts et al.	01-30-2001
	2002-0091225		McGrath et al.	07-11-2002
	6,087,031		Iwasaki et al.	07-11-2000
	2002-0103306		Kerres et al.	08-01-2002
	5,795,496		Yen et al.	08-18-1998
	5,438,082		Helmer-Metzmann et al.	08-01-1995
	5,561,202		Helmer-Metzmann et al.	10-01-1996
	5,741,408		Helmer-Metzmann et al.	04-21-1998
	6,214,488		Helmer-Metzmann et al.	04-10-2001

FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	STATUS						
					Translation	Partial Translation	Eng. Lang. Summary	Search Report	IPER	Abstract	Cited in Spec
	10-045913	A	JP* (corres to US 6,087,031)	02-17-1998		Abst					X
	00/66254	A1	WO* (corres to US 2002-103306)	11-09-2000						X	X
	63-305904	A	JP*	12-13-1988		Abst					X
	52-091788	A	JP*	08-02-1977		Abst					X
	02-248434	A	JP*	10-04-1990		Abst					X
	04-130140	A	JP*	05-01-1992		Abst					X
	2000-501223	A	JP* (corres to US 5,795,496)	02-02-2000							X
	52-099982		JP*	08-22-1977		Abst					X
	06-093114	A	JP* (corres to US 5,438,082, 5,561,202, 5,741,408, 6,214,488)	04-05-1994		Abst					X
	2003-012795	A	JP*	01-15-2003		Abst/ clms					
	2003-068327	A	JP*	03-07-2003		Abst/ clms					
	2003-217342	A	JP*	07-31-2003		Abst/ clms					
	2003-217343	A	JP*	07-31-2003		Abst/ clms					
	2003-147075	A	JP*	05-21-2003		Abst/ clms					

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	F. WANG et al., "Sodium sulfonated-functionalized poly(ether ether ketone)s," <i>Macromol. Chem. Phys.</i> , 1998, pp 1421-1426, Vol. 199, Huthig & Wepf Verlag, Zug, Switzerland*
	F. WANG et al., "Synthesis of poly(ether ether ketone) with high content of sodium sulfonated groups, and its membrane characteristics," <i>Polymer</i> , 1999, pp 795-799, 40, Elsevier Science Ltd. *

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

SECOND INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	10/820,842	
			Filing Date	April 9, 2004	
			First Named Inventor	Jun-ichi ISHIKAWA et al.	
			Examiner Name		
Sheet	2	of	2	Attorney Docket Number	033622-008

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	S. LIU et al., "Novel sodium sulfonated-functionalized poly(ether ether ketone)s derived from 4,4'-thiodiphenol," <i>Polymer</i> , 2001, pp 3293-3296, 42, Elsevier Science Ltd. *
	I. HONMA, "Organic-inorganic Hybrid Membrane--Application to Proton Conductive Solid Polymer Electrolyte Membrane," <i>The Third Separations Science & Technology Study Meeting</i> , 1999, pp 17-20, The Society of Polymer Science, Japan (English translation) *
	English translation of Abstract and claims of JP 2002-358978, published 12-13-2002.*
	English translation of Abstract and claims of JP 2002-367627, published 12-20-2002.*
	English translation of Abstract and claims of JP 2002-121281, published 04-23-2002.*
	English translation of Abstract and claims of JP 2002-105199, published 04-10-2002.*

* Copies attached.

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.